

SARL NEWS SUNDAY 28 JULY 2013

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IN THE NEWS TODAY: SARL TO TAKE THE NEXT STEP IN 5 MHZ PROPAGATION RESEARCH JOINT SCIENCE AND AMATEUR RADIO TRANSPONDER PAYLOADS TO LAUNCH 2014

You are listening to ZS6SRL. Stay tuned for more details on these and other important and interesting items.

SARL TO TAKE THE NEXT STEP IN 5 MHZ PROPAGATION RESEARCH

The SARL will activate a beacon on 5250 kHz by the end of August. This was announced at the Radio in Action Symposium held in Port Elizabeth yesterday, Saturday 27 July. One of the HF transmitters at the NARC will be programmed to send signals at regular intervals and radio amateurs who have the relevant software will be able to record these signals automatically on their computers.

The software that will be used is ALE, which is a complex communications standard also known as MIL-STD 188-141 and USA government standard FED-STD-1045. In the past usage was limited to expensive military and commercial equipment with built-in ALE controllers. Fortunately all of that has changed with the development of software that runs on a PC and makes use of the sound card. ALE is now in regular use by radio amateurs all over the world.

ALE has the capability to call up a specific station, a group of stations, a net or just a general call not directed to a specific station (CQ). It is also possible to perform a sounding or short transmission to allow receiving stations to determine the reigning propagation conditions. The sounding can be (automatically) executed at regular intervals. A sounding typically lasts for 10 seconds and the repetition interval can be set in minute increments.

On the receiving side all the received soundings are displayed in terms of call sign, Bit Error Rate (BER), received Signal-to-Noise-Ratio (SNR) as well as the time that the signal was received. The above information is invaluable to determine the coverage and reception possibilities of a 60m transmission.

An article by Hannes Coetzee, ZS6BZP, explains the full operation and will be posted on the SARL Propagation Research page on www.sarl.org.za during the coming week. The ALE software is free and has been included on the RTA CD. A link to where to download will also be provided on the SARL Web. It should be remembered that the use of 5250 and 5260 kHz is limited to SARL members

who have registered only. Full details on how to register are on www.sarl.org.za, select the link on the right hand side of the home page.

JOINT SCIENCE AND AMATEUR RADIO TRANSPONDER PAYLOADS TO LAUNCH 2014

A consortium, headquartered in the United Kingdom, plans to launch a set of shared purpose ham radio and scientific research CubeSats early next year. It was announced during the QB 50 presentation at the recent AMSAT-UK International Space Colloquium that two CubeSats, carrying SSB, CW and FM voice transponders could be launched into a 600 km orbit in the first half of 2014.

The QB 50 project team says that on July 19th, it had signed a Memorandum of Understanding with AMSAT-UK, AMSAT-Francophone and AMSAT-NL to enable two amateur radio payloads to fly on a pair of CubeSats. These are mission precursor mini-satellites which purpose is to permit the testing of key satellite and payload components ahead of the full QB 50 mission.

The primary objective of the QB 50 mission is the study the temporal and spatial variations of a number of key parameters in the Earth's lower thermosphere doing so with a network of about 40 double CubeSats. These mini-birds will be launched into a 320 kilometre circular orbit. They will be separated by a few hundred feet and carry identical science sensors. These will monitor parameters that will greatly increase our knowledge and understanding of this little explored region of the E and F layers of the Ionosphere.

QB 50 will also study the re-entry process by measuring a number of key parameters during re-entry and by comparing predicted and actual CubeSat trajectories and orbital lifetimes. At the beginning of the mission, the various payloads on-board the spacecraft will be operated in an alternating fashion. Later on the amateur radio transponders will be operated as the primary mission once all QB 50 related experimentation has been concluded.

It is understood that the University of Stellenbosch will be building one or more of the QB50 CubeSats, but at the time of going on air this could not be confirmed.

EMAIL NEWSLETTER

Members should look out for the SARL Update Newsletter in their email inboxes this coming week with information about the three SATL annual contests that will be held during August, These are the SARL HF Phone Contest, the SARL Digital Contest and the SARL HF CW contests. Participants who submit logs will take part in a lucky draw of a ARRL Antenna book.

LEAGUE NEWS

SARL MEMBERSHIP RENEWALS To date the SARL has received 989 membership renewals. Invoices have been sent to members who have not renewed as yet. Please renew now and enjoy a continued and unbroken membership of

the national body for Amateur Radio. If you have not received an invoice call Mariska on Monday on 011 675 2393 to get the details.

CLUB NEWS

No club news was received last week.

SARL News invites clubs and individuals to submit news items of interest to radio amateurs and short-wave listeners. Submit news items - if possible in both English and Afrikaans to www.sarl.org.za/newsinbox.asp, not later than the Thursday preceding the bulletin date.

CONTEST NEWS

CQ ZS - THE SARL HF PHONE CONTEST The aim of the SARL HF Phone Contest is for participants to contact as many amateurs in Southern Africa as possible on the 20, 40 and 80 m amateur bands. The Phone contest takes place on Sunday 4 August and runs from 13:00 to 16:30 UTC.

Participation can be as Single Operator Single Band, Single Operator All Band, Multi Operator Single Band or Multi Operator All Band. Individual competitors and club stations are encouraged to compete. The following frequencies should be used 14 125 to 14 300 kHz; 7 063 to 7 100 and 7 130 to 7 200 kHz and 3 603 to 3 650 and 3 700 to 3 800 kHz

The exchange is a RS report and a consecutive serial number starting at 001. SSB contacts count 1 point, two points are earned for each area worked per band and a further two points for each station worked on all three bands. Contacts with stations outside the 8 contest zones are allowed, QSO points may be claimed but no zone or three-bander points may be claimed.

Certificates are awarded to the first three places and the highest single band score in each contest. Logs must be submitted by 12 August for the Phone contest and sent to zs4bfm@netactive.co.za.

SARL YL SPRINT This is a fun activity to celebrate Women's Day between radio amateurs in Southern African countries. Call "YL Sprint." The Sprint is on the air from 09:00 to 10:00 UTC on Friday 9 August. The exchange is a RS report and YL or OM.

It is a phone sprint on the 40 metre band (7 063 to 7 100 and 7 130 to 7 200 kHz). Contacts between YL stations are worth 5 points, contacts between YL and OM stations are worth 3 points and contacts between OM stations are worth 1 point.

Log sheets must be submitted by 17 August e-mail to zs4bfm@netactive.co.za.

OPERATING OUT OF BAND Radio amateurs are advised to ensure that they operate according to the modes and frequencies as shown in the IARU Region 1 HF Band plan.

On Saturday 20 July, during the Winter QRP Contest, it was noted that three ZS1 stations were operating phone on 7 055 MHz which is in the digital segment. The phone segment on 40 metres starts at 7 063 MHz.

HF PROPAGATION REPORT

Hannes Coetzee, ZS6BZP, reports that the solar activity is expected to remain at low levels. Solar Cycle 24 is turning out to be the weakest solar cycle in more than 50 years. There are however thoughts that this solar cycle may have two peaks and that the second peak is still to come. It is also known that weak solar cycles sometimes produce very strong flares.

If you want to do your own frequency predictions, the expected effective sunspot number for the week will be around 56.

All the bands from 20 to 10 m will provide lots of DX fun with 20 m providing the best openings with 15 m not far behind. There can also be some 10 m openings on east-west sunlit paths.

Please visit www.spaceweather.co.za for further information.

DIARY OF EVENTS

3 - 4 August - Hamnet Winter Challenge 4 August SARL HF Phone Contest 9 August SARL YL Sprint 30 August East Rand Radio Branch AGM at 14:00

The SARL invites you to listen to Amateur Radio Today every Sunday morning at 10:00 CAT on 145,750 MHz in the Pretoria area, with relays on 7 082, 7 205, and 17 660 kHz. There is also a podcast by ZS6RO. For a web-stream and Echolink by ZS6FCS, visit www.sarl.org.za, click on 'Amateur Radio Today', go down the green column and click on 'LISTEN ON THE WEB'. A repeat transmission can be heard on Mondays at 16:30 UTC on 3 230 kHz. The website also lists various other retransmissions. Reception reports, comments and suggestions are invited. Send an email to artoday@sarl.org.za. Sentechn sponsors the transmissions on the non-amateur frequencies.

You have listened to a bulletin of the South African Radio League compiled and edited by Louis Kirstein, ZS1LK.

Thank you for listening, 73.

/EX